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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,758

02/28/2005

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8038-1061

1137

466 7590 05/29/2007  
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EXAMINER

AUSTIN, AARON

ART UNIT

PAPER NUMBER

1775

MAIL DATE

DELIVERY MODE

05/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/525,758

Applicant(s)

HOSHINO ET AL.

Examiner

Aaron S. Austin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 12, and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/28/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group III, claims 10-18 in the reply filed on 5/1/07 is acknowledged.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not appear to disclose a substrate of baked-mud or porcelain, the subject matter of claim 16.

### ***Claim Objections***

Claims 10, 11, 12, and 13 are objected to because of the following informalities: the claims do not clearly separate the claim elements. Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. 37 CFR 1.75(i), MPEP 608.01(m). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the specification does not appear to disclose a substrate of baked-mud or porcelain, let alone define the composition of "baked-mud" such that one of ordinary skill in the art can practice the claimed invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasuhisa et al. (JP2001213666A).

JP '666 teaches a jig for calcining an electronic component comprising a substrate and a zirconia layer (see the English translation paragraphs [0001]-[0003]). The zirconia layer is formed by bonding coarse zirconia particles of 30 to 500 microns and fine zirconia particles of 0.1 to 10 microns using a liquation binding material (see the English translation paragraphs [0007]-[0008]). The liquation binding material serves as a partially fused bonding agent and is formed of oxide mixtures such as aluminum

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oxides, yttria (a transition metal oxide), and MgO (an alkaline earth metal oxide) (see the English translation paragraphs [0011]-[0012]).

Regarding claim 17, the weight ratio of coarse zirconia to the fine zirconia plus the partially fused bonding agent is between (see the English translation claim 3).

Regarding claim 18, a weight ratio of the partially fused bonding agent to the coarse zirconia plus the fine zirconia plus the partially fused bonding agent is 3-25 wt.% (see the English translation paragraph [0011]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuhisa et al. (JP2001213666A) in view of Yasuhisa et al. (JP2002114578).

JP '666 teaches a jig for calcining an electronic component as described above. Further, the zirconia layer is applied over a base material such as an alumina system ingredient, an alumina-magnesia system spinel ingredient, etc. (see the English translation paragraphs [0002] and [0013]).

JP '666 does not teach the base material as being an intermediate layer overlying a substrate.

JP '578 teaches an electronic parts sintering jig comprising a substrate over which is applied an intermediate layer covered by a zirconia surface layer (abstract). The intermediate layer comprises a metallic oxide such as an aluminum oxide (alumina) or alumina-magnesia spinel (see the English translation paragraph [0007]). Therefore, as JP '578 clearly teaches an intermediate layer comprising the same components as the base material of JP '666 provides the advantage of an effective intermediate layer excellent in peeling resistance and reinforcement (see the English translation paragraph [0004]), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to form the electronic component of JP '666 with the base layer as an intermediate layer of a calcining jig as taught by JP '578. Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuhisa et al. (JP2001213666A) in view of Yasuhisa et al. (JP2002114578), and further in view of Higuchi et al. (US 3,860,432).

JP '666 in view of JP '578 teaches a jig for calcining an electronic component as described above.

JP '578 teaches the substrate over which the intermediate layer and zirconia layer are applied has warm strength and is usually comprised of an alumina mullite system (see the English translation paragraph [0002]). The substrate is not specifically taught as being comprised of baked-mud or porcelain.

Higuchi et al. teach a porcelain electric insulator comprising mullite and alumina (claim 4). Therefore, as Higuchi et al. clearly teach porcelain may be comprised of an alumina mullite system, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to form the substrate of JP '578 taught as usually comprised of an alumina mullite system (see the English translation paragraph [0002]) of porcelain. Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP2002037676 to Hayashi Koji, JP 2001130084 to Murakami Masakatsu, and JP-B-3139962 (JP-09-295872) to Goto Tetsuro et al. were all cited in Applicant's specification but not listed in the IDS.

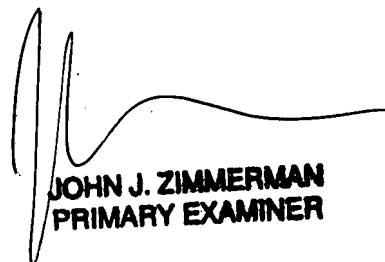
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron S. Austin whose telephone number is (571) 272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASA



**JOHN J. ZIMMERMAN**  
**PRIMARY EXAMINER**